

ABSTRACT

The present invention systems and methods facilitate automated efficient and effective electronic component and system failure prediction and reliability determination. A present invention electronic component 5 reliability determination system and method includes adjustments for actual operating and environmental conditions and stress impacts on failure analysis. A reference failure rate is adjusted based upon monitored operational and environmental conditions to compensate for impacts associated with the monitored conditions. The conditions are monitored at 10 predetermined intervals and an adjusted determination of an “instantaneous” failure rate is made. The instantaneous failure rate is utilized to ascertain a reliability index value. An electronic component reliability determination system and method can also account for infant mortality and aging effects in the determination of the reliability index value. 15 In addition, reliability index values for both a component and a system in which the component is included can be ascertained.